

Afrotropical Asilidae (Diptera) 20. The genus *Pycnomerinx* Hull, 1962 (Stenopogoninae)

by

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ABSTRACT

Three species of *Pycnomerinx* are recognised (*cogani* Oldroyd, *gweta* Oldroyd and *rhodesii* Ricardo), redescribed, illustrated and keyed. *P. moremensis* Oldroyd is synonymised with *P. cogani*. The existence of two undescribed species from the Cape Province of South Africa is drawn attention to. The genus is restricted to *Acacia* savannah areas of southern Africa.

INTRODUCTION

The Afrotropical Stenopogoninae (*sensu* Artigas & Papavero 1988) may be divided into two main groups of genera; those with setose, and those with bare, anatergites (Table 1). The only stenopogonine genera listed in the Afrotropical catalogue (Oldroyd 1980), but not included in the Table, are *Eclipsis* Bezzi and *Epiblepharis* Bezzi. Papavero (1973) placed these genera, originally described as

TABLE 1

Afrotropical genera of Stenopogoninae arranged according to the possession of setose anatergites. The currently accepted number of Afrotropical species in each genus is given after each name. Genera needing status reassessment or revisionary work are marked with an asterisk.

Genera—setose anatergites

Anasillomos Londt (1)
Daspletis Loew (7)
Diocobroma Hull (1)
Dogonia Oldroyd (2)
Microstylus Macquart (79)*
Oratostylus Ricardo (2)
Remotomyia Londt (3)

Genera—bare anatergites

Acnephalum Macquart (7)
Ammodaimon Londt (1)
Ancylorhynchus Berthold (25)*
Cyrtopogon Loew (1)*
Empodiodes Oldroyd (1)*
Gonioscelis Schiner (30)*
Habropogon Loew (2)
Hermannomyia Oldroyd (2)
Heteropogon Loew (7)*
Holopogon Loew (4)*
Hynirhynchus Lindner (1)*
Hypenetes Loew (21)
Lycostomyia Oldroyd (1)*
Pycnomerinx Hull (3)*
Rhabdogaster Loew (6)*
Rhacolaemus Hermann (1)*
Scylaticus Loew (17)*
Sisyrnodytes Loew (15)
Spanurus Loew (4)*
Stenopogon Loew (8)*
Teratopomyia Oldroyd (1)*

subgenera of *Microstylum*, in the synonymy of *Microstylum* and, for the present, I accept this arrangement. A recent key to the genera possessing setose anatergites is available (Londt 1983). The remaining genera are currently being researched as there are a number of questions requiring answers. For example (i) are the Afrotropical species assigned to the holarctic genera *Cyrtopogon*, *Heteropogon* and *Holopogon*, correctly placed? (ii) what is the true status of monotypic genera such as *Empodiodes*, *Hynirhynchus*, *Lycostommyia*, *Rhacholaemus* and *Teratopomyia*? Until questions such as these are answered it is not possible to provide a better key to the stenopogonine genera with bare anatergites. For the present the reader will have to continue to use the keys provided by Hull (1962) and Oldroyd (1963 1974). It is, however, hoped that a new key will be possible within the next few years.

This review of the small genus *Pycnomerinx* is the first in a series of planned revisions aimed ultimately at a better understanding of the stenopogonine genera with bare anatergites.

MATERIAL AND METHODS

Efforts were made to examine all previously recorded material, especially types, and as much other material as possible. Museums and collections which provided specimens for study are listed below, together with the abbreviations which have been used throughout this paper. The names of the people who kindly assisted me with loans are given in parentheses. My thanks are extended to all these people without whose help this study would not have been possible.

AM = Albany Museum, Grahamstown, South Africa (Dr F. W. Gess).

BM = The Natural History Museum, London, U.K. (Mr J. Chainey).

NM = Natal Museum, Pietermaritzburg, South Africa.

NMZ = Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe (Mrs R. Sithole).

SMW = State Museum, Windhoek, Namibia (Mr J. Irish).

Preparation of specimens for study

In all instances specimens were dry-mounted on pins. Male genitalia were drawn with the aid of a drawing-tube attached to a Wild M5 stereomicroscope after first removing the terminal segments of the abdomen and clearing them in hot potassium hydroxide. Genitalia so treated were stored temporarily in small plastic vials containing a mixture of ethanol and glycerine, until completion of the study when they were permanently mounted in Canada Balsam on small strips of transparent cellulose. Each cellulose strip being pinned below the appropriate specimen.

Preparation of descriptions

Terminology follows McAlpine (1981). Information provided under the heading 'material examined' is derived entirely from specimen labels except when this is given in square brackets, such data is not found on the original labels. The method of citation for both dates of collection and quarter-degree grid references have been standardised and may therefore not be exactly as found on specimen

labels. Male genitalia are invariably rotated through 90°, either clockwise or anti-clockwise. This rotation is ignored when referring to the various aspects of the genitalia (ie. the epandrium is always considered to be dorsally situated).

HISTORICAL PERSPECTIVE

The history of *Pycnomerinx* is short and uncomplicated.

Ricardo (1925)—described *Habropogon rhodesii* from Zimbabwe.

Hull (1962)—described the genus *Pycnomerinx* with his new species *P. annulatus* as type species.

Oldroyd (1974)—pointed out that *rhodesii* was not a true *Habropogon*, but belonged to Hull's *Pycnomerinx*, and that *annulatus* was a synonym of *rhodesii*.

An additional three new species were described *P. cogani*, *P. moremensis* and *P. gweta*.

Oldroyd (1980)—catalogued four species (*cogani*, *gweta*, *moremensis* and *rhodesii*) repeating *annulatus* as a synonym of *rhodesii*.

TAXONOMY

Pycnomerinx Hull, 1962

Pycnomerinx Hull, 1962:145. Type species: *Pycnomerinx annulatus* Hull, 1962 (= *Habropogon rhodesii* Ricardo, 1925), by original designation.

Hull (1962) stated that *Pycnomerinx* is 'Related to *Scylaticus* Loew from which it is separated by the rather long though slender microsegment attached to the long, slender, third antennal segment, which is much shorter than in *Scylaticus* and more slender; also by the dense and quite long and extended mystax of the facial gibbosity and by the unusually long, large, swollen palpus. Second segment of the palpus densely covered below with long, coarse, bristly pile. First segment of all of the tarsi quite short, especially on the first four legs.' In my view the antennal differences alluded to are unconvincing in the light of variation within the two genera under discussion. The palpal characteristics are, however, diagnostically valuable. Heads dissected and cleared show only a single well-developed palpal segment (Figs 1, 4). The fact that this segment lacks the terminal pit and internally associated 'gland' (present in most genera of the subfamily) suggests that *Pycnomerinx* may lack completely the second palpal segment. The overall length of tarsomeres are somewhat shorter than in *Scylaticus* but lengths of individual tarsomeres relative to each other do not show marked differences. In his key (couplet 55A), Hull (1962) also points to differences in the setation of the scutellar margin; *Scylaticus* having '1 or 2 pairs of bristles' while *Pycnomerinx* has the 'whole posterior margin of the scutellum with an extensive, dense fringe of long bristles and bristly hairs'. The significance of this apparently good character will only be fully appreciated when a study of *Scylaticus* is completed. In the same couplet Hull also draws attention to a difference in venation; *Scylaticus* having the 'fourth posterior cell [cell m_3] generally narrowed to half its maximum width' while *Pycnomerinx* has this cell 'open in its maximum width'. A preliminary assessment indicates that the genera do not demonstrate a clear difference with regard to the shape of cell m_3 but again the importance of this feature will only be properly appreciated after a revision of *Scylaticus* has been done. For the time

being I consider that the single-segmented palp represents the most reliable synapomorphic character for *Pycnomerinx*. The somewhat downturned, bow-shaped form of the labium (Fig. 1) also appears to be a potentially useful diagnostic feature of *Pycnomerinx* (as mentioned and illustrated by Oldroyd (1974)).

Key to the species of *Pycnomerinx* Hull

- 1 All mesonotal microsetae yellowish, no darkly coloured ones present **rhodesii** (Ricardo, 1925)
- Mesonotum with a number of dark red-brown to black microsetae 2
- 2 Antennal macrosetae dark red-brown; T3 entirely fine pruinose (golden in ♂, silvery in ♀); wing membrane without slight staining adjacent to certain veins **gweta** Oldroyd, 1974
- Antennal macrosetae white or pale yellow; distal half of T3 silver pruinose (proximal half shiny black); wing membrane frequently with yellowish staining along certain veins **cogani** Oldroyd, 1974

Pycnomerinx rhodesii (Ricardo, 1925)

Figs 1–10, 17

Habropogon rhodesii Ricardo, 1925:274.

Pycnomerinx annulatus Hull, 1962:145.

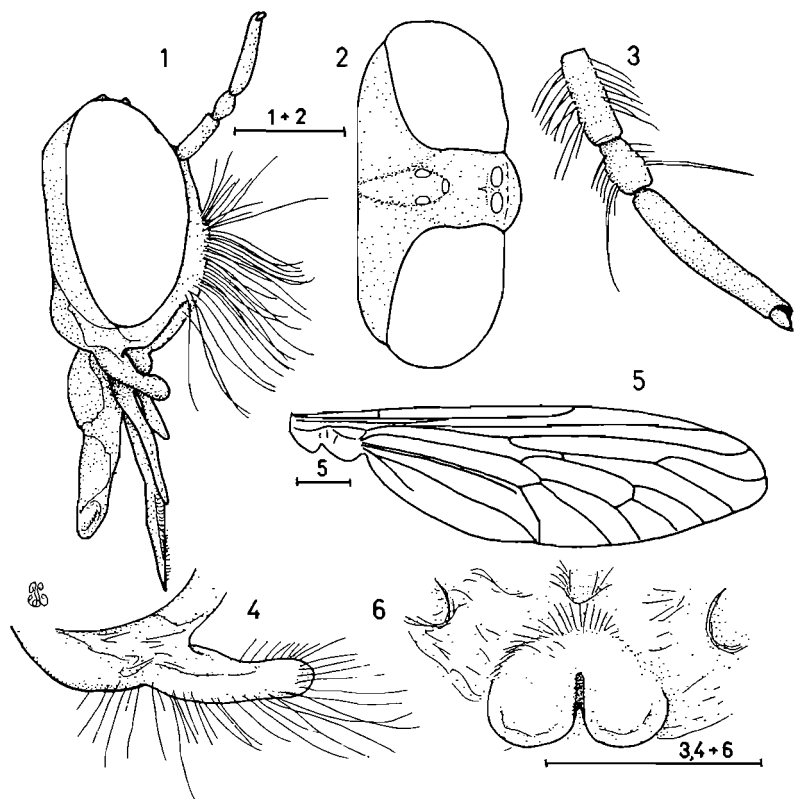
Pycnomerinx rhodesii; Oldroyd, 1974:62; 1980:367.

Taxonomy: Ricardo (1925) did not designate a holotype but merely stated 'Types (male and female), and another from Bulawayo (*R. Stevenson*, 1923)'. I have seen all three specimens, the BM pair bearing both circular red 'Type' labels as well as circular blue 'Syntype' labels. The single NMZ male bears two handwritten labels 'Paratype' and '*Habropogon rhodesii* n. sp. Ricardo'. I consider all three specimens syntypes and designate the BM male as lectotype and the two females paralectotypes accordingly.

Redescription: Based on lectotype male unless otherwise stated.

Head: (Figs 1–4): Dark red-brown to black; gold-silver pruinose; all setae pale yellow-white. Antennae missing (other topotypic specimens have dark red-brown antennae with white setae on both scape and pedicel—Fig. 3). Ratio of maximum head width (in anterior aspect) to width of face (measured at level corresponding to maximum width of head) 4,1:1. Face silver pruinose except for lower margins adjacent to eyes and area beneath mystax which are shiny dark red-brown. Lower 60 % of face gently gibbose (Fig. 1). Shiny yellow-white mystax composed of moderately well-developed setae (no obvious macrosetae) and confined to facial gibbosity. Frons and vertex uniformly pruinose except for small, dull, central spot just above antennal bases. Vertex (Fig. 2) more or less in the same plane as dorsal surfaces of eyes and not markedly depressed as in most Asilidae. Ocellarium weakly pruinose. Occipital region entirely pruinose but more intensely so bordering eyes. Palp (Fig. 4) single-segmented, dark red-brown with whitish setae laterally. Proboscis dark red-brown.

Thorax: Dark red-brown to black; gold-silver pruinose. Mesonotum uniformly pruinose; all setae shiny orange-yellow. Macrosetae: 2 notopleurals (npl), *ca* 8

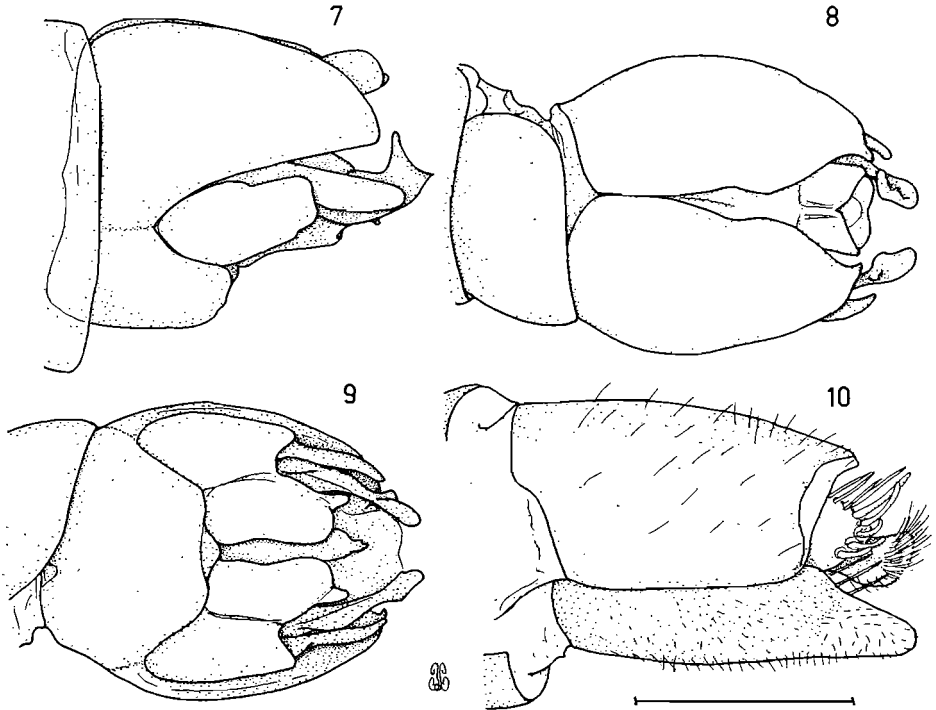


Figs 1-6. *Pycnomerinx rhodesii* Ricardo. 1-2. Head aspects. 1. Lateral. 2. Dorsal. 3. Outer view of right antenna. 4. Right palp. 5. Wing. 6. Prosternum, anterior aspect. (1-4 & 6—Skukuza ♂; 5-25 km W of Windhoek ♂). Scale lines = 1 mm.

supra-alars (spal), *ca* 9 postalars (pal). Acrostichals (acr) and dorsocentrals (dc) absent anteriorly, weakly developed and forming part of a cluster of yellowish setae postsuturally. Scutellum with *ca* 12 yellowish macrosetae and many paler setae marginally; disc lacking setae except for a few small ones adjacent to hind margin. Prosternum (Fig. 6) with upper margin poorly demarcated. Pleura gold-silver pruinose except for a large black spot occupying most of anterior half of anepisternum (anepst) and upper part of propleuron (prpl). Katatergal macrosetae (ktg) white; metanepisternum and anatergites lacking setae. Postmetacoxal area entirely membranous. Wing: Length (measured from tip to humeral cross-vein) 7,3 mm, breadth (measured through first fork of radial sector) 2,5 mm. Venation (Fig. 5) brown-yellow; membrane unstained and uniformly covered with microtrichia. Legs: Dark red-brown; tibiae slightly paler dorsoproximally; all setae pale yellow-white except for a few black ones ventrally on tarsomeres. Length of tarsus *ca* 55-60 % that of tibia.

Abdomen: Dark red-brown to black anteriorly, becoming increasingly orange-brown distally; hind margins of most segments silver to gold-silver pruinose; setae, pale yellow, moderately well developed, except for a group of macrosetae

laterally on first tergum (T1). Genitalia orange-brown (Matopo Hills ♂ illustrated—Figs 7–9); rotated through 90°. Epandrium fused with hypandrium laterally (Fig. 7) but very faint 'suture' may be visible. Gonocoxite (Fig. 9) of fairly elaborate form and possessing a flattened, finely setose median lobe (the flattened parts of opposing lobes being more or less in the same plane). Aedeagus short and apparently with a single very short terminal penisfillum. Cerci appear largely fused (Fig. 8).



Figs 7–10. *Pycnomerinx rhodesii* Ricardo, genitalia. 7–9. Skukuza ♂. 7. Lateral. 8. Dorsal. 9. Ventral. 10. Farmers Brigade ♀, lateral. Scale line = 1 mm.

Female (paralectotypes): Similar to male but abdomen hardly showing any orange-brown coloration; legs somewhat browner. Genitalia (Fig. 10—Farmers Brigade ♀ illustrated). Subgenital plate produced distally as a scoop-shaped digging organ. Acanthophorites in two groups of about 6 in number. Cerci with group of fine setae distally.

Variation: There is a small degree of individual variation within populations. The colour and number of setae may differ slightly and pruinescence may be more golden in some individuals. The dark pleural spot is not always as obvious as in the type series. Namibian specimens tend to be smaller and may have the antennal flagellum brown.

Material examined: BOTSWANA: 2 ♂, Sepopa [18°13'S:22°13'E], W. Okavango, 29.iii.1973, Nat. Mus. Bulawayo (NMZ); 2 ♂, Serowe [22°25'S:26°44'E],

iv.1983, Forchhammer (NM); 4 ♂ 1 ♀, Farmers Brigade, 5 kms SE Serowe, 2226BD, 19.iv.1983 8.iii. 28.iv. 1.v.1984 ii.1986, P. Forchhammer, Hillside N slope, Malaise trap 1 (NM); 1 ♀, Farmers Brigade, 5 kms SE Serowe, 2226BD, iii.1986, P. Forchhammer, Malaise trap 2 (NM); 2 ♂ 2 ♀, Farmers Brigade, 5 kms SE Serowe, 2226BD, iv. v.1986, P. Forchhammer, Malaise trap 3 (NM); 1 ♂, Forestry Nursery, ca. 6 kms SE Serowe, 2226BD, 22.iv.1985, Forchhammer, 1300m, Malaise trap 3 (NM). MOZAMBIQUE: 1 ♀, Macaneta [25°52'S:32°14'E], 30.iv.1980, H. R. Feijen (NM); 2 ♀, Goba [probably 26°12'S:32°08'E], 13.iv. 12.v.1980, H. R. Feijen (NM). NAMIBIA: 1 ♀, Hoas 273, Outjo, 1914DC, 10–11.v.1973, H 12865 (SMW); 1 ♂, 10 km SW Tsumeb, Rd 1/9, 19°18'S:17°37'E, 21.iii.1984, Stuckenberg & Londt, Mixed woodland and roadside grass (NM); 1 ♂ 1 ♀, Kombat [19°43'S:17°42'E] (W48), 1–6.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♂ 2 ♀, 15 km NE Grootfontein, J. Scribante Skitbaan, Rd8/2, 19°28'S:18°15'E, Stuckenberg & Londt, 21.iii.1984, Grassy road verges (NM); 1 ♂, 21 km SE Steinhausen, Rd 57, 21°53'S:18°27'E, 18.iii.1984, Stuckenberg & Londt, Dry *Acacia* woodland (NM); 1 ♂, 7 km SW Gross Barmen, 2216BA, 24.iv.1983, Stuckenberg & Londt, Thornveld (NM); 1 ♂, 25 km W of Windhoek, 2216DB, 22.iv.1983, Londt & Stuckenberg, Thornveld (NM); 3 ♂ 1 ♀, 13 km S Windhoek, 2217CA, 18.iv.1983, Stuckenberg & Londt, Rocky slopes, Mixed Thornveld (NM); 1 ♀, 26 km N Windhoek, Road 1/6, 22°20'S:17°04'E, 29.iii.1984, Londt & Stuckenberg, Dry stream bed *Acacia* riparian woodland (NM); 3 ♂ 2 ♀, Aris, 30 km S Windhoek, 2217CA, 18.iv.1983, Stuckenberg & Londt, Thornveld (NM BM); 1 ♀, 24 km N Witvlei, Road 57, 22°16'S:18°26'E, 18.iii.1984, Londt & Stuckenberg, *Acacia* thornveld and grassy verge of road (NM); 1 ♀, Gobabis [22°30'S:18°58'E], ii/iii.1971 (NM); 1 ♂ 2 ♀, Noachabeb 97, Keetmanshoop, 2718AD/BC, 22–28.iv.1972, H 8026 (SMW). SOUTH AFRICA: *Cape Province*: 1 ♂, 17 km SE of Kuruman, 2723CB, 23.iii.1982, J. Londt & L. Schoeman, Rocky hilltop / grass (NM). *Natal*: 1 ♂ 1 ♀, Mhlopheni Nat Reserve, 8 km SE of Muden, 2930AB, 8.iv.1983, Londt Barraclough & Seymour, Thornveld (NM); *Transvaal*: 1 ♂, Satara [24°19'S:31°47'E], K. N. P. Survey, 26.iv.–1.v.1969, Potgieter & Strydom (NM); 1 ♂ 1 ♀, Kruger National Park, vicinity of Skukuza, 2431DC, 9–12.iv.1985, J. Londt, Bushveld (NM); 1 ♀, Brits Dist. Silkaatsnek (2527DB), 21.iii.1972, J. A. van Reenen (NM); 2 ♀, Pretoria [25°45'S:28°10'E], 18.iii. 9.iv.1967, D. H. Jacobs, KAM298JR (NM); 1 ♀, Naboomspruit, 2529AA, iv.1980, B. Meyer, Dept Entomology, Univ Pretoria (NM). ZIMBABWE: 1 ♂ 1 ♀, (lectotype and paralectotype), Bulawayo [20°10'S:28°43'E], 11 12.iv.1923, R. Stevenson (BM); 1 ♂ (paralectotype), Bulawayo [20°10'S:28°43'E], 12.iv.1923, R. Stevenson (NMZ); 3 ♂, Matopo Hills [20°36'S:28°28'E], iv.1932, Miss A Mackie (BM NM).

Distribution: Apparently limited to southern Africa. Distributed widely from northern Namibia in the west through Botswana and eastern Zimbabwe into the eastern parts of South Africa (Transvaal and Natal) and southern Mozambique (Fig. 17). It is of interest that the British Museum expedition of 1971–72 failed to collect specimens of *rhodesii* in northern Botswana where good collections of both *cogani* and *gweta* were made.

Ecology: The little that is known is gleaned from available label data and personal field experience. The species is found in grass in *Acacia* woodland (= bushveld or thornveld) areas. Records indicate that adults fly during the latter part of summer (February to May) (Table 2).

TABLE 2
Seasonal incidence of *Pycnomerinx* species—adults only.

Species	Months for the year											
	J	F	M	A	M	J	J	A	S	O	N	D
<i>cogani</i> Oldroyd	—	•	•	•	•	—	—	—	—	—	—	—
<i>gweta</i> Oldroyd	—	—	•	•	•	—	—	—	—	—	—	—
<i>rhodesii</i> (Ricardo)	—	•	•	•	•	—	—	—	—	—	—	—
Sp. n. 1 (Richtersveld)	—	•	—	—	—	—	—	—	—	—	—	—
Sp. n. 2 (Meiringspoort)	—	—	—	—	—	—	—	—	—	—	—	•

Pycnomerinx cogani Oldroyd, 1974

Figs 11–13, 17

Pycnomerinx cogani Oldroyd, 1974:62; 1980:367.

Pycnomerinx moremensis Oldroyd, 1974:62; 1980:367. **Syn. n.**

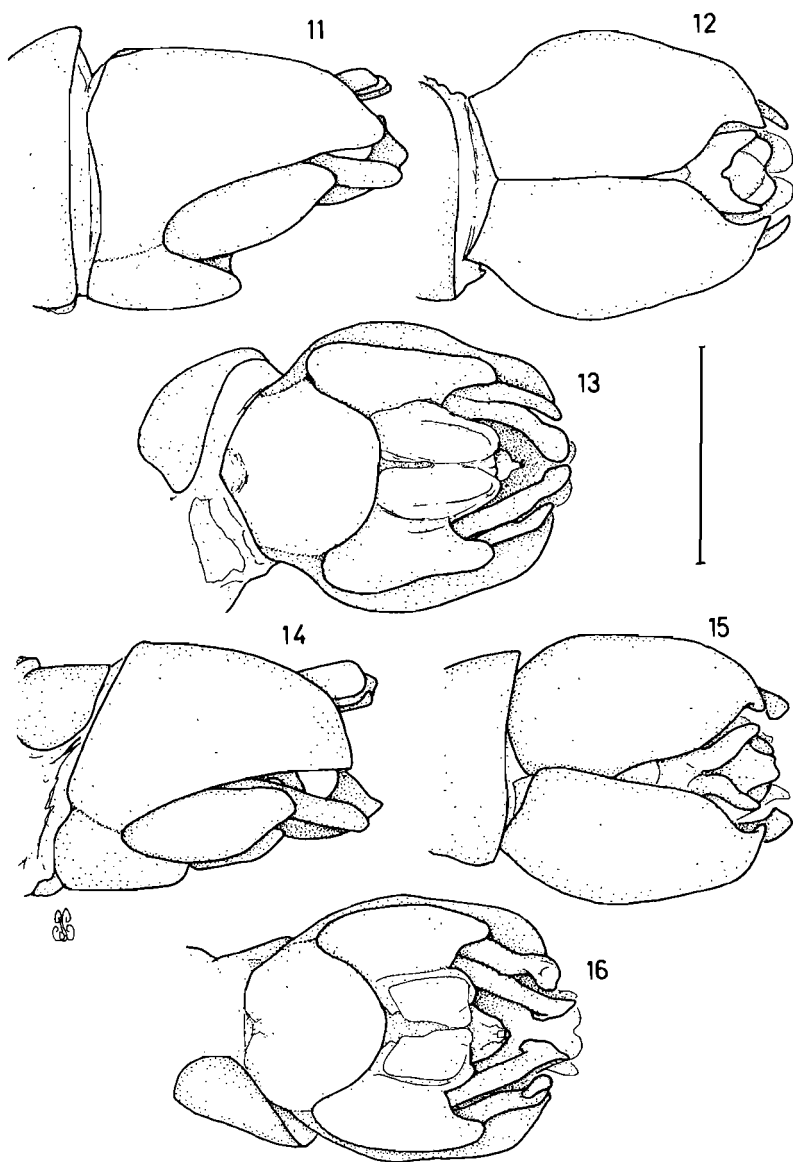
Oldroyd (1974) described this species in a key. The full description reads as follows—‘Legs entirely black. Abdomen in both sexes sharply divided; first four segments black with broad, grey hind margins; segments 5–7 bright orange; terminalia black. Wings strongly spotted on forks and crossveins.’ The available material was not fully itemised. All we are told is ‘Type in London’ and that the type-locality is ‘Botswana, 16 km NE Ghanzi . . .’. I have seen all the BM material and find that there are four specimens bearing this locality data, only one of which bears a ‘type’ label, as well as a number of other specimens collected during the same expedition. As there is no mention of paratypes in the formal description it must, unfortunately, be assumed that none of the other specimens have any type status.

Redescription: Based on holotype male unless otherwise stated. Similar to *P. rhodesii* except for the following features.

Head: Silver pruinose; all setae white. Antennae dark red-brown with yellow-white setae on scape and pedicel. Head width : face width ratio 4,1:1. Mystax shiny white.

Thorax: Gold-silver and silver-gold pruinose. Mesonotal setae shiny orange-yellow anteriorly and laterally, longish dark red-brown centrally and posteriorly. Macrosetae: 3 npl, *ca* 8 spal, *ca* 4 pal; acr absent and dc weak anteriorly; these setae moderately developed and forming part of a cluster of yellow and dark red-brown setae postsuturally. Scutellum with *ca* 12 yellow-white macrosetae and many paler setae marginally. Wing: 7,2 × 2,1 mm. Venation similar to *rhodesii*, brown; membrane slightly stained at some forks and crossveins. Legs: Dark red-brown. Length of tarsus *ca* 60–65 % that of tibia.

Abdomen: Dark red-brown to black anteriorly, T5 partly orange-brown, T6–8 largely orange-brown. Genitalia dark red-brown (topotypic ♂ illustrated—Figs 11–13).



Figs 11-16. *Pycnomerinx* male genitalia aspects. 11-13. *P. cogani* Oldroyd (10 mls NE of Ghanzi). 11. Lateral. 12. Dorsal. 13. Ventral. 14-16. *P. gweta* Oldroyd (2 mls NE Sehithwa). 14. Lateral. 15. Dorsal. 16. Ventral. Scale line = 1 mm.

Female: Similar to ♂.

Variation: There is a small degree of individual variation within populations. The dark pleural spot is not always as obvious as in the holotype. Specimens from the Moremi Reserve (including type of *moremensis*) have legs largely orange-brown.

Synonymy: Oldroyd described *P. moremensis* on a single female specimen. Apart from having orange-brown legs this specimen appears to be conspecific with *cogani*. Two other female specimens from the *moremensis* type-locality are available; one is similar to the holotype, the other has entirely dark red-brown legs. I do not accept the leg colour as sufficient grounds for the recognition of *moremensis* and therefore synonymise it with *cogani* at least until males with orange-brown legs are available.

Material examined: BOTSWANA: 3 ♀ (inc. holotype *P. moremensis* Oldroyd), Moremi Reserve, 19°23'S, 23°33'E (B11), 18–20.iv.1972, Sth Afr Exp BM 1972–1 (BM); 2 ♀, L. Ngami, 12 mls NE Sehithwa [= Sehithwa 20°23'S:22°45'E] (B9), 16–17.iv.1972, Sth Afr Exp BM 1972–1 (BM); 2 ♂, Kuke Pan, 20°59'S, 22°25'E (B7), 14–15.iv.1972, Sth Afr Exp BM 1972–1 (BM); 2 ♂ 1 ♀, 3 mls NE Maun [20°00'S:23°25'E] (B17), 21.iv.1972, Sth Afr Exp BM 1972–1 (BM NM); 1 ♂ 1 ♀, Makarikari Pans, 20°08'S, 25°32'E (B20), 22–23.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♀, 2 mls N Gweta (B19), 20°11'S, 25°15'E, 22.iv.1972, Sth Afr Exp BM 1972–1 (BM); 2 ♂ (inc. holotype *P. cogani* Oldroyd) 2 ♀, 10 mls NE Ghanzi [22°00'S:22°00'E] (B6), 14.iv.1972, Sth Afr Exp BM 1972–1 (BM); NAMIBIA: 1 ♀, Onze Rust 192, 24°09'S, 18°02'E, 17–18.v.1973, Jacot-Guillarmod (AM). SOUTH AFRICA: *Cape Province*: 1 ♀, Roaring Sands Resort nr. Witsand, 2822CB, 17–18.iii.1982, J. Londt & L. Schoeman, *Acacia* woodland (NM). ZIMBABWE: 1 ♂, Matetsi [18°14'S:25°59'E], ii.1934, R. H. R. Stevenson (BM).

Distribution: Apparently limited to southern Africa. Known from seven localities in Botswana, one in Namibia, one in Zimbabwe, and one in the northern Cape Province of South Africa (Fig. 17).

Ecology: Only one specimen, collected in *Acacia* woodland, has any information concerning the type of habitat occupied by this species. In this respect it is similar to *rhodesii*. The species has, however, not been collected sympatrically with *rhodesii*. On the other hand *cogani* has been collected sympatrically with *gweta* from which it is readily distinguishable. Records indicate that adults, like *rhodesii*, fly during the latter part of summer (February to May) (Table 2).

Pycnomerinx gweta Oldroyd, 1974

Figs 14–17

Pycnomerinx gweta Oldroyd, 1974:65; 1980:367.

As in the case of *cogani*, Oldroyd (1974) described *gweta* in a key. The full description, drawn from three couplets, reads as follows—'Legs at least partly red or reddish'; 'Femora not entirely red'; 'Femora and tibiae both with black antero-dorsal streak. Male abdomen entirely red; female abdomen completely covered with yellow grey tomentum, except for shining black terminalia. Wings clear.'

Again the material which was available at the time of description was not fully itemised and we must accept that only one specimen, the 'type', has any type status.

Redescription: Based on holotype male unless otherwise stated. Similar to *P. rhodesii* except for the following features.

Head: Antennae with macrosetae dark red-brown, other setae white. Head width: face width ratio 4,8:1. Mystax white.

Thorax: Mesonotal setae mixed short yellow and longer dark red-brown. Macrosetae: 2–3 yellow npl, ca 8 yellow and dark red-brown spal, ca 5 yellow pal; acr absent and dc weak anteriorly; these setae weakly developed and forming part of a cluster of setae postsuturally. Scutellum with ca 14 yellow-white macrosetae and many paler setae marginally; disc lacking setae except for a few moderately developed ones adjacent to hind margin. Pleura uniformly gold-silver pruinose (black spot occupying most of anterior half of anepst and upper part of prpl absent—although type has a 'greasy' mark corresponding to this area; other specimens lack this greasy mark and are uniformly pruinose). Wing: 6,5 × 2,1 mm. Venation dark brown. Legs: Femora dark red-brown dorsally, brown-yellow ventrally; tibiae brown-yellow except for dark red-brown parts ventrodistally; all setae pale yellow-white except for a single row of black ones ventrally on tarsomeres. Length of tarsus ca 60–65 % that of tibia.

Abdomen: Orange except for first two segments which are at least partly dark red-brown to black; segments uniformly fine silver-gold pruinose. Genitalia orange-brown (Lake Ngami ♂ illustrated—Figs 14–16).

Female: Similar to male but abdomen uniformly dark red-brown; uniformly strongly gold-silver pruinose except for shiny black terminal segments. Genitalia similar to *rhodesii*.

Variation: There is a small degree of individual variation within populations. The colour and number of setae may differ slightly, especially on antennae and mesonotum. Colour of abdominal terga is variable, smaller males may have orange parts reduced to the hind margins of terga (26 km N Windhoek ♂) or terga may be entirely dark red-brown (Gobiswater ♂). A female (Angola/Namibia border) has yellow-brown margins to otherwise dark red-brown terga. Smaller specimens may also have more extensively darkly coloured legs.

Material examined: BOTSWANA: 1 ♂, Moremi Reserve, 19°23'S, 22°33'E (B11), 18–20.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♂, L. Ngami, 2 mls NE Sehithwa [= Sehitwa 20°23'S:22°45'E] (B8), 15–16.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♀, L. Ngami, 12 mls NE Sehithwa [= Sehitwa 20°23'S:22°45'E] (B9), 16–17.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♀, Maun [20°00'S:23°25'E] (B16), 21.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♀, 25 mls W Gweta (B18), 20°17'S, 24°54'E, 21–22.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♂ (holotype *P. gweta* Oldroyd), 2 mls N Gweta (B19), 20°11'S, 25°15'E, 22.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♂ 1 ♀, 18 mls NE Kalkfontein [22°08'S:20°53'E] (B3), 12–13.iv.1972, Sth Afr Exp BM 1972–1 (BM); 1 ♀, Farmers Brigade, 5 kms SE Serowe, 2226BD, v.1986, P. Forchhammer,

Malaise trap 2 (NM). NAMIBIA: 1 ♂ 1 ♀, Angola—S. W. Afr Border Beacon 39, Ovamboland, 18.iv.1970, H. D. Brown (NM); 1 ♂, 38 km SE Ondangwa, Ovamboland, 1715DD, 9.v.1971, H 2486 (SMW); 1 ♂, Gobiswater Fm., 12 mls N. Grootfontein [19°32'S:18°05'E] (W50), 5.iv.1972, Sth Afr Exp BM 1972-1 (BM); 1 ♂, Waterberg Nat. Park Entrance, Road 2512, 20°32'S:17°20'E, 20.iii.1984, Stuckenberg & Londt, *Acacia thornveld* (NM); 1 ♂ 2 ♀, Okahandja, 2116DD, 24.iv.1983, Londt & Stuckenberg, Riverine vegetation (NM); 1 ♂, 26 km N Windhoek, Road 1/6, 22°20'S:17°04'E, 29.iii.1984, Londt & Stuckenberg, Dry stream bed *Acacia* riparian woodland (NM).

Distribution: Apparently limited to southern Africa. Known from eight localities in Botswana and six in Namibia (Fig. 17).

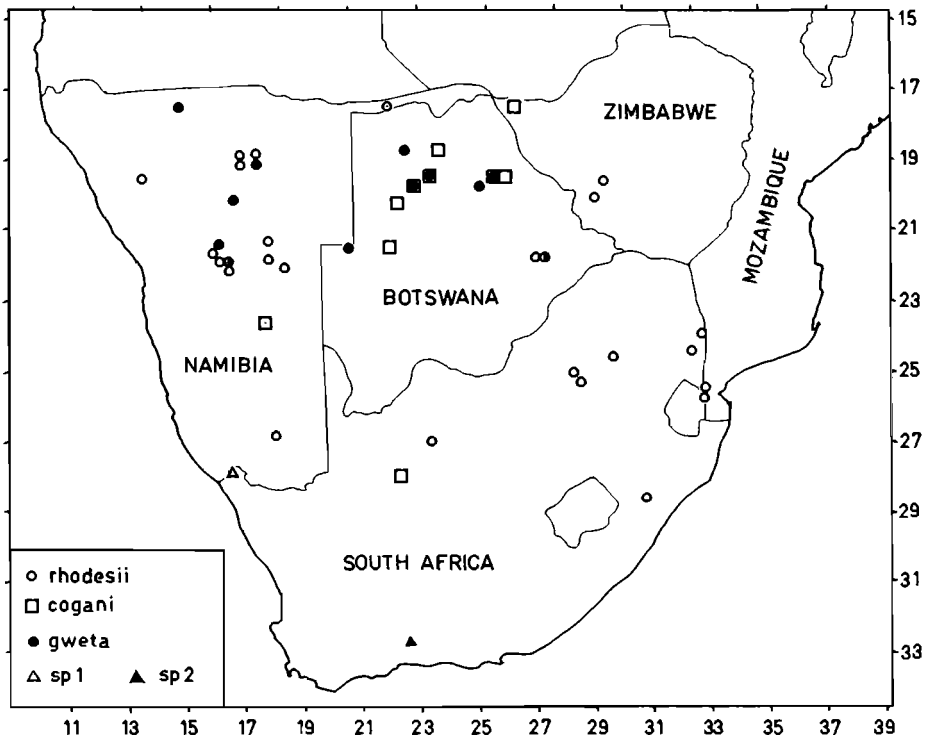


Fig. 17. Distribution of *Pycnomerinx* species.

Ecology: The limited label data and field experience suggest that, like the other species in the genus, it is associated with *Acacia* woodland. The species has been collected sympatrically with *cogani* and at the same locality (but slightly later in the year) as *rhodesii* (Serowe). Records indicate that adults, like *rhodesii*, fly during late summer (March to May) (Table 2).

Pycnomerinx sp. n. 1

A single female specimen from the Richtersveld, near the southern border of Namibia, displays a few characteristics which suggest that it does not belong to

any of the described species. For the present I refrain from providing a name for this species. A few of the main points of difference are as follows:

Facial gibbosity weak and occupying less than half the face; vertex and occiput (except along eye margins) brown pruinose. Proboscis shortish (shorter than antenna). Mesonotal setae short, white and sparsely distributed; macrosetae few in number, white – 1 npl, 2 spal, 2 pal. Mesonotum with pattern of brown (centrally) and silver (marginally except for two pairs of centrally situated spots) pruinescence. Scutellum with only 4 major marginal macrosetae; disc entirely free of setae near the margin. Wing length 4,3 mm. Legs with dark red-brown and orange-brown longitudinal streaks. Abdominal terga dark brown pruinose with clear silver pruinose lateral longitudinal streak; sterna similar. Abdomen with short, white, sparsely distributed (especially mid-dorsally) setae.

Material examined (plotted on Fig. 17): SOUTH AFRICA: *Cape Province*: 1 ♀, Richtersveld, Numees Mine, 28°18'S, 16°58'E, 16–20.ii.1979, Lamoral Bampton & Barnley, Mal. trap (NM).

Pycnomerinx sp. n. 2

Yet another single female specimen, this time from the southern Cape Province, housed in the Natal Museum, represents an undescribed species of *Pycnomerinx*. Again I refrain from giving a name to this species. The main characteristics separating it from the other taxa are as follows:

Proboscis short, about as long as antennae. Antennae not elongate spindle shaped but fairly broad basally and tapering fairly rapidly towards distal tip. Setae of frons, vertex and upper occiput mostly dark red-brown. Mesonotum with short, shiny orange-brown general body setae; macrosetae few in number and dark red-brown to black in colour – 2 npl, 2 spal, 3 pal; dc present as dark red-brown post-sutural series. Scutellum with 6 (4 white, 2 brown) marginal macrosetae and very few tiny accompanying setae. Wing length 4,5 mm. Abdominal pruinescence similar to sp. n. 1 above but not as strongly evident.

Material examined (plotted on Fig. 17): SOUTH AFRICA: *Cape Province*: 1 ♀, Meiringspoort, 3322BC, 11–12.xii.1979, Londt & Stuckenberg, Rocky hillside & stream edge (NM).

Note: The December collection date is somewhat earlier in the summer than recorded for any other species of *Pycnomerinx*.

DISCUSSION

Pycnomerinx is presently known only from southern Africa although I suspect that it will in time be recorded from southern Angola, southern Zambia and central Mozambique. They live in *Acacia* savannah. Specimens are usually collected on relatively open ground between grass tussocks. As yet nothing is known of the feeding preferences of these rather wasp-like flies. Although members of the genus have a similar general appearance to species of *Scylaticus* they are readily identifiable by their very characteristic single-segmented palpi. Unlike many groups of asilids the male genitalia of *Pycnomerinx* species do not appear to be of very great diagnostic value.

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